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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,208	10/09/2001	Ross A. Benson	TA-00455	5805

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EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/973,208

Applicant(s)

BENSON ET AL.

Examiner

Barbara J. Musser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12 and 17-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: Species 1: curing the composite with a component intended to be part of the final product in a slot in one of the preforms and Species 2: curing the composite with a sizing tool in the slot which is replaced by a component after curing of the preform having the slot.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record

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showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Jim Bradley on 7/25/03 a provisional election was made without traverse to prosecute the invention of group 1, claims 1, 2, 4-12, and 17-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3 and 13-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claims 10 and 11 recite the limitation "the peel plies" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is suggested these claims are intended to depend from claim 7.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Childress(U.S Patent 5,980,665) in view of Composite Structures: Theory and Practice by Owens et al.

Childress discloses making a composite structure for aircraft by placing multiple peel plies on a surface of a composite, inserting pins into the surface through the peel plies, removing the peel plies, applying a second composite to the pins so that they extend into the second composite, and curing the second composite.(Col. 1, ll. 12-13; Col. 11, ll. 26-45; Col. 12, ll. 40-42; Col. 13, ll. 8-9; Figures 1 and 4) The reference does not disclose the second composite being woven preform with a base having two legs extending therefrom. However, Childress does disclose that the second composite can be anything so long as it is capable of z-pin insertion.(Col. 13, ll. 53-55) Owens et al. discloses a woven preform with a base and two legs which contained matrix failures and

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lasted longer before failure than other composites used in aircraft.(Pg. 398) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a woven preform with a base and two legs extending outward as the second composite of Childress since Childress discloses any material capable of z-pin insertion and be used and since Owens et al. discloses the preform can be used with z-pins and contains matrix failures and lasts longer before failure than other joints used in aircraft.(Pg. 398-99)

8. Claims 2, 4-8, 12, 17-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childress and Owens et al. as applied to claim 1 above and further in view of Affordable Composite Structure for Next Generation Fighters by Bersuch et al.

Owens et al. is silent as to whether a composite is located within the slot between the two legs of the woven preform when the preform is cured. Bersuch et al. discloses the layers can be co-cured.(Pg. 6) It would have been obvious to one of ordinary skill in the art at the time the invention was made to co-cure the woven preform and the composite located between the legs of the preform since co-curing layers is well-known as evidenced by Bersuch et al. which discloses co-curing composites is known in the aircraft forming arts.

Regarding claim 5, Childress discloses adhesive can be present between the two layers being joined together by the z-pins.(Figure 4)

Regarding claim 6, although the references do not disclose adhesive between the legs and composite within its slot, one in the art would appreciate that adhesive

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could be used when a better bond was desired particularly since Childress discloses it is known to have adhesive between composite parts.(Figure 4)

Regarding claims 8, 12, and 21, while the reference is silent as to trimming the pins, one in the art would appreciate that all the pins may not go in to the same depth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove a peel ply and trim the pins even with the ply surface so insure the pin were all the same height.

Regarding claim 12 and 21, the reference does not disclose the peel plies being rubber. One in the art would appreciate that the peel plies could be formed of any material which would not stick to the composite during curing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use rubber as the peel ply of Childress, Owens et al., and Bersuch et al. since any conventional material could be used for the plies and since rubber does not stick to materials.

Regarding claim 17, Childress discloses the first composite can be a panel.(Col. 13, ll. 42-44)

9. Claims 9-11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Childress, Owens et al., and Bersuch et al. as applied to claims 4 and 17 above, and further in view of Leach(U.S Patent 4,729,860).

The references cited above do not disclose the peel plies being woven fabric, nylon, or glass. Leach discloses conventional peel plies ca be made of woven nylon or glass fibers.(Col. 4, ll. 61-64) It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to use any conventional material for the peel plies of Childress, Owens et al., and Bersuch et al. as they are well-known and conventional materials. Only the expected results would be achieved.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is (703)-305-1352. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


BJM


JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300